ARRI

LOCPRO 35

Instruction Manual
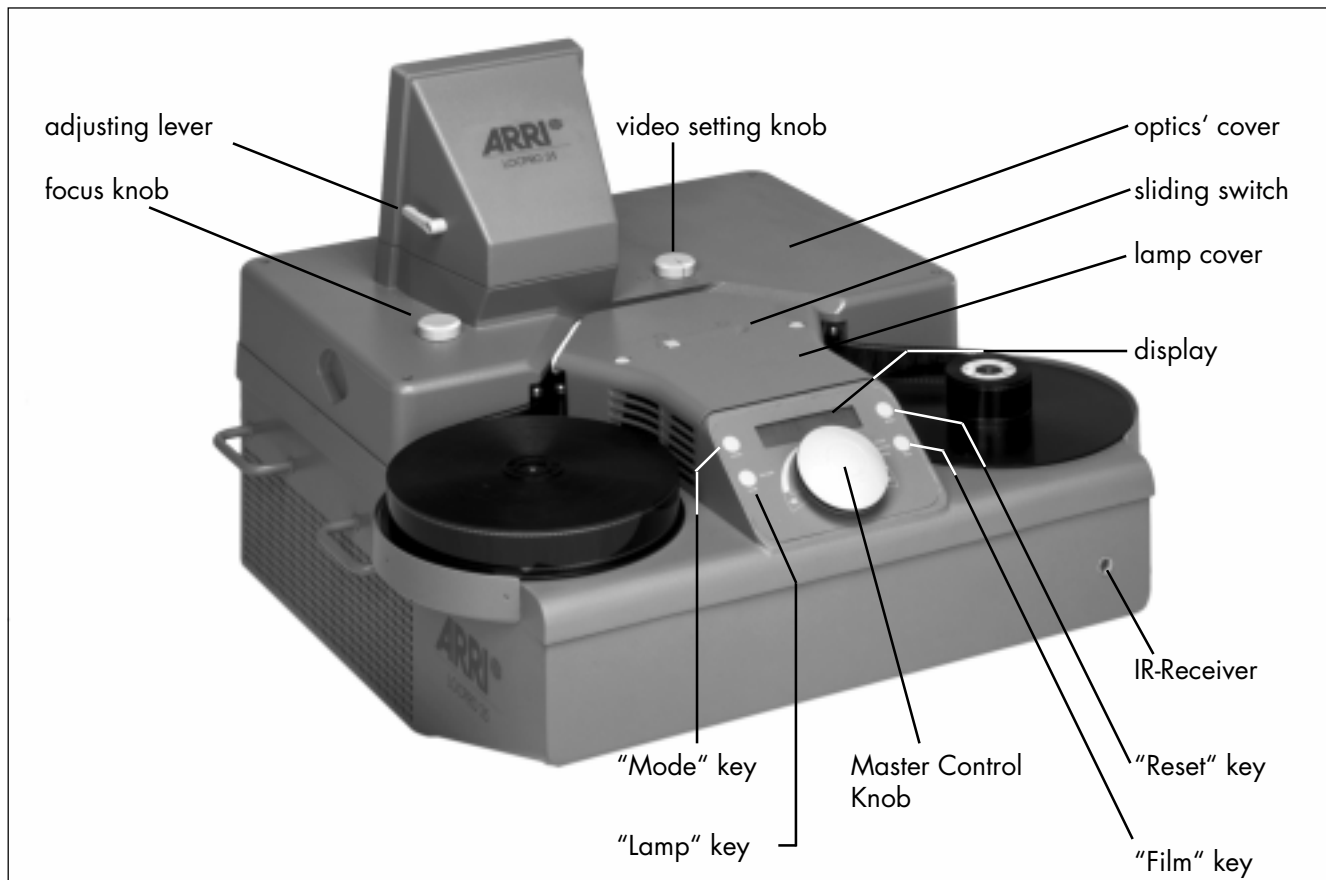As of: March 1999

adjusting lever

focus knob

video setting knob

optics' cover

sliding switch

lamp cover

display

IR-Receiver

"Mode" key

"Lamp" key

Master Control Knob

"Reset" key

"Film" key

1. Contents

Contents

2. Safety

The functions and workmanship quality of this unit were tested at the factory. It complies strictly to the following European Guidelines:

- Guideline 89/336 EEC of 3. May 1989
  "Guideline of the Council of 3. May 1989 for bringing into line the statutory regulations of the member countries about electromagnetic side-effects."

- Guideline 73/23 EEC of 19.02.73
  "Guideline of the Council of 19. Feb. 1973 for bringing into line the statutory regulations of the member countries with respect to electrical operating material for use within particular voltage limitations.

The electric installation of the room in which the LOCPRO 35 is being used must comply with the demands of the IEC commitments.

Warnings

For your own safety, please adhere to the following warnings:

⚠️ *Caution! – stands for danger of injury. Attention!– equipment damage possible.*

Note: Operational error possible!

General Safety Specifications

⚠️ *Caution: Danger of Injury! Never reach into the film channel while the LOCPRO 35 is running or remove the covers!!*

- In order to ensure safe and proper operation it is essential that you acquaint yourself with this user manual.

- Assembly and initial operation are to be carried out only by persons familiar with the equipment.

- Make sure the LOCPRO 35 stands securely and do not block the air vents of the HTI lamp cooling fan on the bottom side! See ⇨ **photo** page 9.

- Keep all inflammable material away from the air vents of the HTI lamp cooling fan.
see ⇨ **photo** page 9.

- For sufficient air cooling, it is essential that the air supply and escape vents on the sides are not blocked.
see ⇨ **photo** page 9.

- Disconnect the unit from the mains before starting maintenance or service!

- The unit is to be opened only by a qualified electrical specialist. If fuses need to be replaced, ensure that only the values indicated are used. See chapter 7.4.

- Repairs should be made by authorized service technicians only!

- Use only original replacement parts and accessories!

- Follow the maintenance instructions in this user manual.

- Follow the shipping and storing instructions.

Important Notes

- In humid weather please take the usual and customary safety measures.

- In case of poor picture steadiness check the film guide for possible contamination, such as e.g. splicing residues or emulsion deposits.Clean if necessary! (see chapter 7.1)

- Optical surfaces should only be cleaned with an optic cleaning brush. To remove sticky emulsion deposits, please use an optic tissue, moistened with pure alcohol.

- Do not use solvents for cleaning!

- Do not loosen the paint-secured screws!

Product Identification

Please always refer to the model type and unit serial number when ordering spare parts or requesting information.

Explanation of the Symbols

⇨ **photo** refers to objects identified by pictures, photos or graphs.

3. General Product Information

The LOCPRO 35 is a lightweight mobile projector for on-location use. A switch-over mirror system allows either wall projection or the use of a 1/3" CCD Color High Resolution video camera. The LOCPRO 35 can synchronize DAT-recorders or perfotape players for picture/sound synchronization. The following sync signals are available for output: For synchronization with DAT recorders a timecode LTC signal, for synchronization with perfotape players in connection with ASU-accessory (Audio Sync Unit) a biphase signal with a programmable number of pulses per picture.

- *Fast film transport and simple operation:*
  The film is transported by a motor with a directly-driven double-sided sprocket wheel. This patented intermittent film drive system is acute to less than 0.01 seconds at any projection speed. Constant film tension and safe film transport are ensured by computer-controlled drive motors for both film carriers. The "auto-stop" feature stops the film automatically 6 ft (2 m) before the end of the film.

Automatic detection of the winding direction makes it unnecessary to manually switch over from winding direction A to B.
The open film channel facilitates film loading once the film has been placed onto the winding plate. All steps from the formation of loop sizes to standby operation are carried out fully automatically. In addition, a film can be removed at any time even in the middle of a film roll.

- *Direct high speed rewinding:*
  High speed rewinding and quick location of certain film scenes is easily possible with the gentle high speed shuttle/rewinding system. By simply turning the Master Control Knob this system allows you to switch directly to high speed winding at 200 fps and back to the chosen projection speed. The frame counter remains active so that after switching back from high speed winding to projection speed, the frame line is automatically repositioned to the correct setting.

- *Excellent image quality with flicker-free projection:*
  Best possible image brightness, excellent picture steadiness and image quality are the outstanding features of the LOCPRO 35. The 400 W HTI lamp allows optimum projection of more than 6 ft (2 m) image width and an average color temperature of 5.400°K.

  The built-in video camera (optional) can be connected to a monitor, video recorder or video printer. Two video outputs are available, FBAS (BNC) and Y/C. In addition, it is possible to mask the video image electronically to match the different film formats as required.

- *Telecine Mode (Pulldown Mode):*
  Flicker-free transfer onto video tape at 24, 25 or 30 fps is possible depending on the integrated video system - 50 Hz PAL or 60 Hz NTSC. In both cases, the integrated video camera synchronizes frame transport.

- *Sound Synchronization:*
  To synchronize DAT-players an LTC signal (timecode) output is available. In connection with an ASU, a biphase signal (synchronized picture change signal with forward/reverse recognition) allows for synchronization of perfotape players. For the adaption to different perfotape players it is possible to program on the ASU the pulses per picture and the max. acceleration.

The LOCPRO 35 is available in the following versions:

- LOCPRO 35 St 230V/50Hz. ...... Id.No. M1.83000.0

- LOCPRO 35 St 115V/60Hz. ...... Id.No. M1.83000.A

- LOCPRO 35 TV 230V/50Hz. ..... Id.No. M1.83000.B
  with integrated CCD video camera (PAL)

- LOCPRO 35 TV 115V/60Hz. ..... Id.No. M1.83000.C
 with integrated CCD video camera (NTSC)

4. Unpacking and Installation

In order to prevent condensation from forming on individual components, the LOCPRO 35 should be kept in its packing an additional day (before unpacking), if the temperatures during shipping (cold) vary extremely from those temperatures in the installation area (warm).

1) Cut off the packing straps.

2) Lift off the packing in an upward direction.

3) Take out the additional items (User Manual, projection lamp, accessories, maintenance kit).

4) Remove the plastic foil.

5) Always transport the projector to its destination in its shipping or projection case and lock caster lock levers.

Note: Optimum wall projection of 2300 mm (6.6ft) is reached when the LOCPRO 35 is installed in such a way that there is a distance of 4 m (12 ft) between the back of the unit and the projection wall.
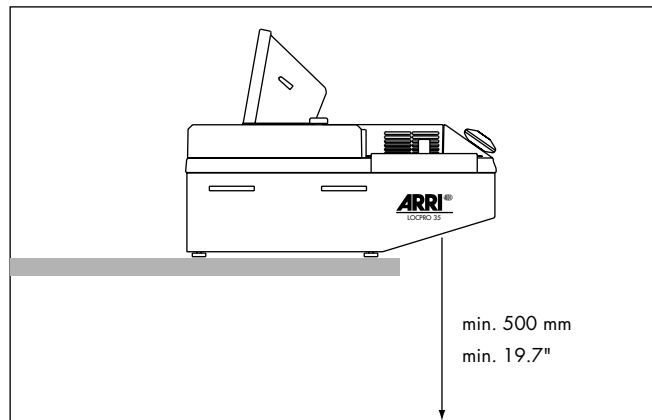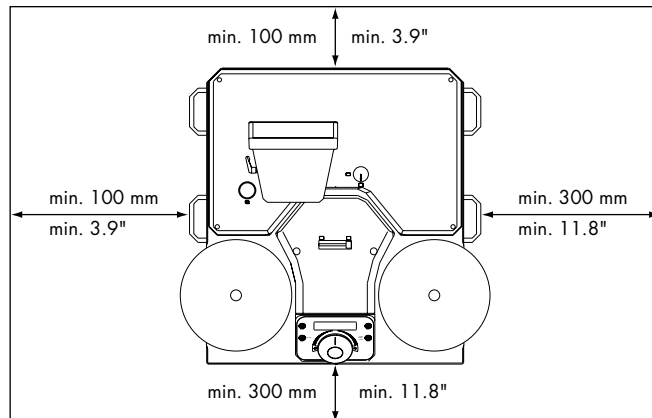
⚠ *The LOCPRO 35 must stand on a solid flat surface and should be disconnected from the mains before it is moved.*

Lift the LOCPRO 35 out off its shipping case and set it up in such a way that the air vents on the bottom of the lamp cooling fan ⇨ **photo** are not obstructed. Observe the clearances on the top and sides, see ⇨ **photo** page 9.

⚠ *Keep all flammable materials away from the exit vents of the lamp fan.*
Do not cover up the HTI ventilation ducts.

5. Initial Operation

5.1 Precautions for Shipping

⚠️ *In order to avoid shipping damage the safety screw must always be screwed in each time the unit is transported..*

1) Depress spring-loaded latches on lamp cover ⇨ **photo** and lift off lamp cover.

2) Remove the shipping safety screw ⇨ **photo**.
   To store the screw for subsequent use, screw it into the bore-hole ⇨ **photo**.

lamp cover

spring loaded latches

bore hole   safety screw

setting knob

slide switch

Y/C-socket   BNC-socket
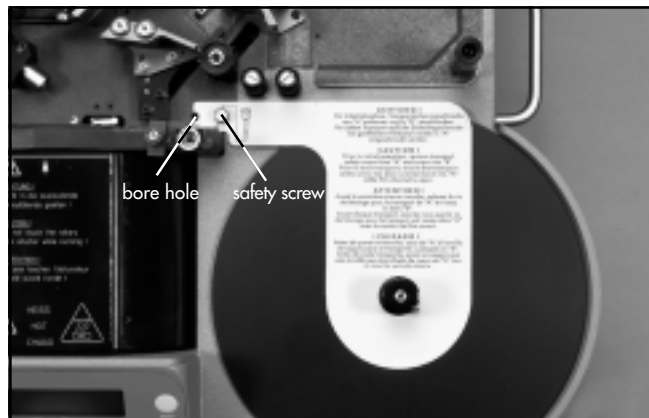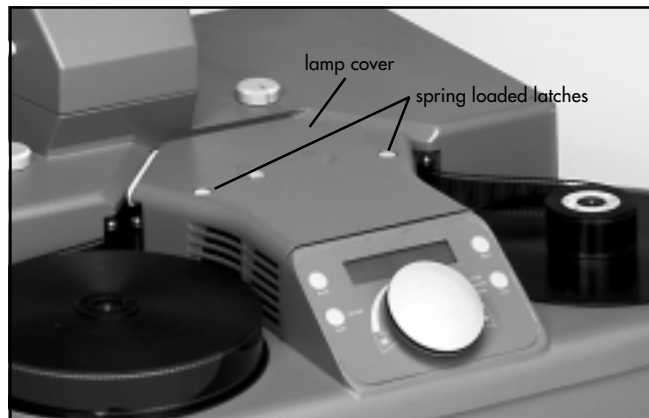
5.2 Video-Option

⚠️ *The LOCPRO 35 must be switched off before connecting it to an interface cable or DAT-recorder or perfotape player.*
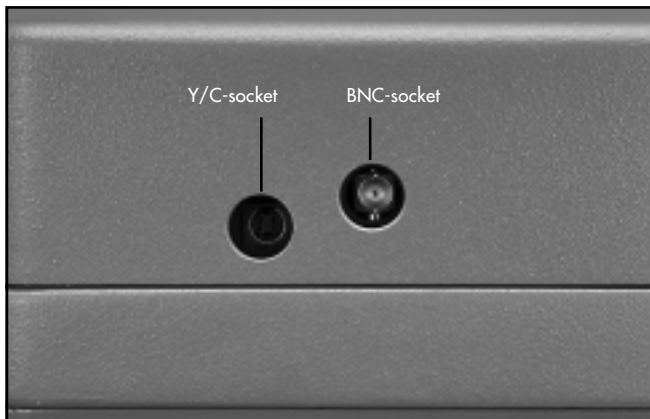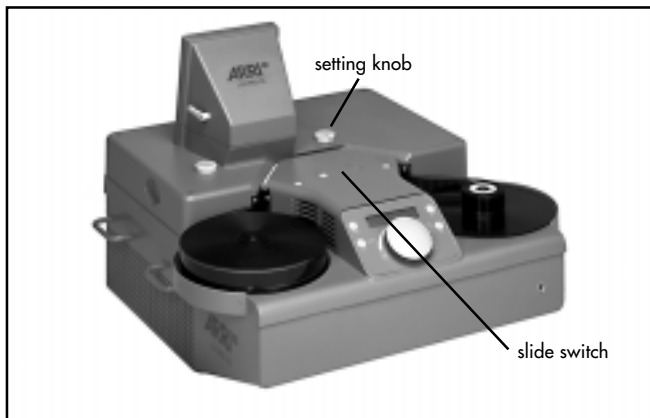
1) Connect the monitor via BNC-or Y/C-cable to the appropriate socket ⇨ **photo** on the LOCPRO 35.

2) Set mirror with selection knob ⇨ **photo** to the TV symbol.◯

3) Shift slide switch on lamp cover ⇨ **photo** to the TV symbol.◯

Note: Video "on/off" is only possible when the Master Control Knob is in the "0" position, i.e. when the film is not being transported.

4) Switch on TV monitor.

5) Adjust monitor for optimum image quality.

5.3 Format masks

The standard aperture size of 18.6 x 24 mm can be adapted to the various projection formats by using format masks.

The following masks are available:

Type	Ident No.
Film Gate Mask Set (13 masks incl. case) .	M2.81853.0
Mask 1:1.37 ACAD	M2.81876.0
Mask 1:1.66 WIDE SCREEN	M2.81877.0
Mask 1:1.85 WIDE SCREEN	M2.81878.0
Mask 1:2.35 SUPER 35	M2.81885.0
Mask 1:1.85 SUPER 35	M2.81882.0
Mask 1:1.78 HDTV S35.........................	M2.81881.0
Mask 1:1,78 HDTV	M2.81879.0
Mask 1:1.66 SUPER 35	M2.81880.0
Mask 1:1.33 TV-ISO	M2.81875.0
Mask 1:2.35 S 35 ABOVE	M2.81886.0
Mask 1:1.85 S 35 5 VERS	M2.81883.0
Mask 1:1.8 S 35 5.7 VERS.	M2.81884.0
Mask 1:1.78 SUPER 35 HDTV –3-PERF: ...	M2.81908.0
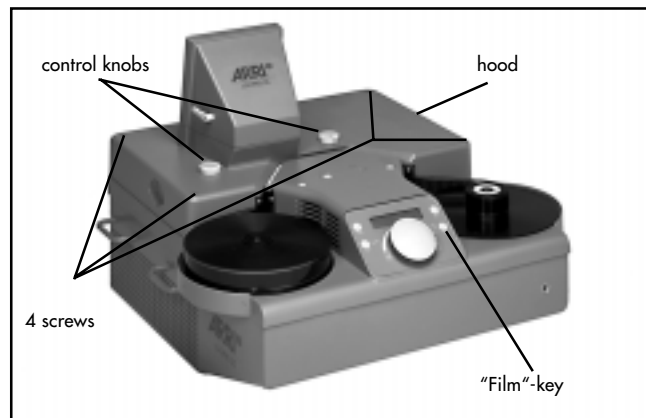
5.3.1 Exchanging the film gate format mask:

Insert format mask:

- Open the film channel with "Film" – key

- Switch off the main power supply.

- Remove optics cover.
  Remove the control knobs and the 4 screws with an Allen key SW3. See Chapter 7.2 (# 2)
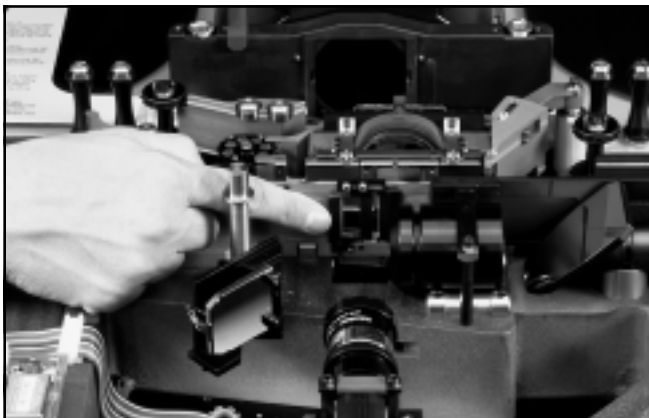
- Remove lens. See Chapter 7.2 (# 4)

- Check that the film gate frame and the surface of the film track are clean.

- Insert the format mask with the film gate frame facing the film gate (frameless side facing upward) by sliding the mask in from the right side into the spring-loaded support of the film track until the mask engages with the film gate.

- Check the film gate mask for correct positioning.

- Replace lens.

- Replace optics cover.

Remove format mask:

- Open film channel with "Film" – key

- Switch off main power supply.

- Remove optics cover. See Chapter 7.2 (# 2)

- Remove lens. See Chapter 7.2 (# 4)

- Remove the mask from the film gate by gently pressing back the mask and then sliding it back out to the right ⇨ **photo**.

- Replace lens.

- Replace optics cover.

5.4 IR-Remote Control

The IR-Remote Control (an accessory) consists of a hand-held transmitter ⇨ **photo** and a receiver ⇨ **photo** mounted on the front of the LOCPRO 35.

In order to guarantee trouble-free operation, there should be no partition walls or other obstacles between transmitter and receiver.

• Unpack the remote control and insert the batteries making sure to observe the correct polarity.

IR-receiver

master control knob

000 FPS   00275

mains switch

5.5 Switching on the LOCPRO 35

1) Set the Master Control Knob ⇨ **photo** to "0" position.

2) Switch on the mains switch ⇨ **photo** on the back of the unit.

5.6 Switching on the HTI lamp

Before switching on the HTI lamp, please ensure that

- The Master Control Knob ⇨ **photo** is in the "0" position.

- Film is not running in the projector.

1) Depress "lamp" key for approx. 1 second to ignite the lamp. During this ignition phase, which lasts approx. 5 seconds, all key functions are disabled.

2) The HTI lamp can be switched off after a reset time of 5 seconds by depressing the "lamp" key again.

Note: Run-up time to full light power is approx. 40 seconds. Working temperature of the lamp is reached in three minutes. During this period the lamp should never be switched off, because this gradually reduces the life of the lamp and results in poor ignition behavior.

master control knob

"lamp"-key

Note: The average life of an HTI lamp is approx. 750 hours. Spare lamps can be ordered under Id.No. 05.09873.0.

frame counter

"film"- key

5.7 Film loading

1) Place the film roll with the neg. film on the left film plate so that the emulsion side is facing the operator. If a print film is projected, the emulsion side must be on the opposite side.

2) Open the film channel by depressing "film" key ⇨ **photo** for some time (>1s).

3) Insert film into the film channel and fix end of the film in the film core of the right winding plate. Then wind up approx. three turns.

⚠ *Ensure same winding direction on both plates! To avoid damage of film track do not use stapled film.*

4) Tighten both film rolls.

5) Press "film" key briefly. The feed carriage closes the film channel. The film loop is formed automatically and the frame counter ⇨ **photo** is reset to "0".

Note: Inside or outside winding direction (A/B) are recognized by the projector.

5.8 Video

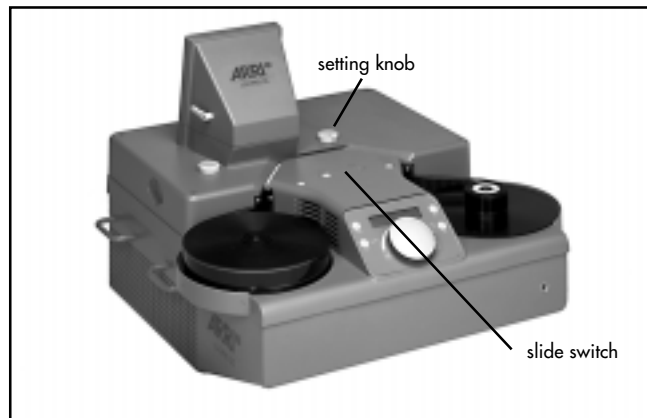As an option, the LOCPRO 35 can be equipped with a video system.

5.8.1 Video camera

The LOCPRO 35 TV is available with two video camera versions.
50 Hz unit:
50 Hz shutter (open sector 79°) with PAL video camera.
60 Hz unit:
60 Hz shutter (open sector 71°)with NTSC video camera.

Starting video camera operation

1) Swing the mirror out of the optical path to the TV symbol ▢ with selection knob "video" ⇨ **photo**.

2) Shift the slide switch ⇨ **photo** to the right to the TV symbol ▢.

setting knob

slide switch

Note: Switch-over to video operation is only possible during still projection and when film is not being transported (sync phase of revolving shutter from internal quartz to video synchronization).
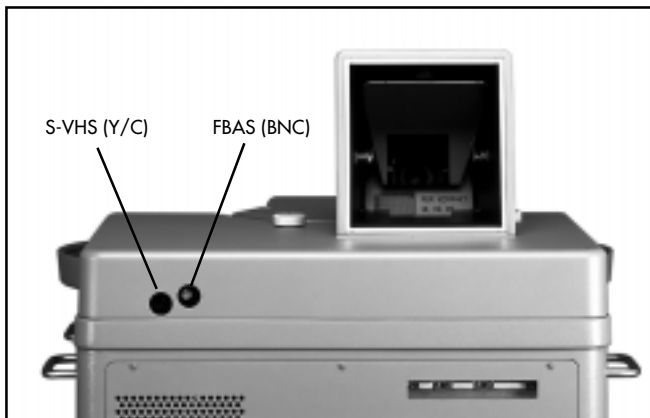
S-VHS (Y/C)   FBAS (BNC)

5.8.2 *Video outputs TV*

Video output sockets provide FBAS (BNC) ⇨ **photo** and S-VHS (Y/C) ⇨ **photo** signals from the color CCD video camera.

A monitor, video recorder, video printer can be connected to the LOCPRO.In addition the video images can be transferred to an image processing computer.

6. Functions

6.1 Wall Projection

⚠ *The LOCPRO 35 must stand on a solid, flat surface and should be completely disconnected from the mains before it is moved.*
See also notes in chapter 4.

Optimum wall projection of approx. 2.3 m (7 ft) width is reached at a distance of 4 m (12 ft), measured from the back of the unit to the projection wall.

6.1.1 Frame line

After closing the film channel (see chapter 5.7), adjust the frame line, if necessary.

Note: Frame line adjustment is only possible during still projection.

master control knob

000 FPS   00275

"film"- key

1) Master control knob is in "0" position (no film transport).

2) The frame line (horizontal line in the projected picture) can be shifted out of the visible picture by briefly depressing the "film" key ⇨ **photo**.
Each keystroke shifts the frame line by 1/4 frame.

adjusting
lever
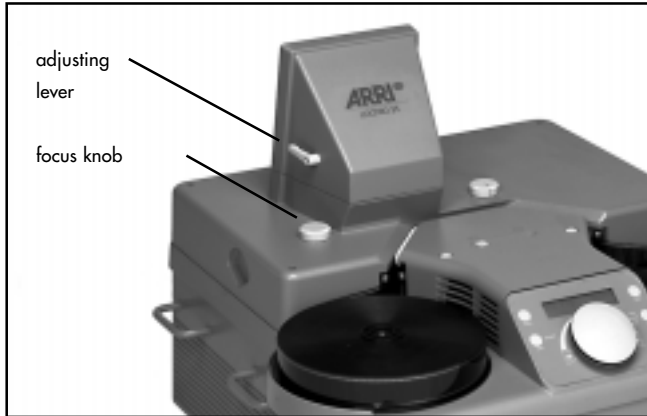
focus knob

6.1.2 *Image Position and Focus*

- The projected image can be tilted upward up by 15°
  with the projection height adjusting lever ⇨ **photo**.

- Focus is adjusted with the rotary focus knob ⇨ **photo**.

6.1.3 Frame Rate

The frame rate can only be set after the mains has been switched on and the film channel is closed. Ensure that the Master Control Knob ⇨ **photo** is reset to "0" each time after the film channel has closed.

1) Select the requested frame rate (visible on the display) by turning the Master Control Knob ⇨ **photo**. The film now runs at the selected speed.

The following frame rates can be chosen for forward and reverse operation:

- 50 Hz Version
  1.56-3.12-6.25-12.5-25-50 fps (standard)
  Highspeed shuttle 200 fps
  48-24-30 fps can be selected directly via "Mode" Key
  ⇨ **photo** (see chapter 6.6).

- 60 Hz Version
  1.87-3.75-7.5-15-30-60- fps (standard)
  Highspeed shuttle 200 fps
  48-24-25 fps can be selected directly via "Mode" Key
  ⇨ **photo**.

master control knob

"Mode"- key

Note: **The reduced running speeds (1 per thousand with switched on NTSC video operation) are displayed as the non-reduced speeds, e.g. 59.94 fps is displayed as 60 fps.**

2) In "0" position (center position) the film transport is stopped.

3) The "autostop" stops the film run approx. 2 m (6 ft) before the film end.

⚠️ *Attention: Film channel cannot be opened during film run.*

6.1.4 Single Frame Operation

If, during still projection, the Master Control Knob is turned only slightly to the right or left of the "0" position so that film transport has not yet started, single frame release is possible. In this case, a dot appears in the center of the display ⇨ **photo**.

1) By briefly depressing the "Film" Key, the film is advanced by 1 frame.

2) If the Master Control Knob is turned to the left of the "0" position, then single frame release to the left becomes active. When turning to the Knob to the right, single frame to the right is activated.

Note: Single frame operation is also possible via IR remote control.

6.1.5 Autostop Function

In order to prevent the film from unintentionally running out to the end, the auto-stop feature automatically stops the film approx. 2 m (6 ft) before the end. This applies to both film plates.

Note: The auto-stop function is only ensured if the film core used coincides with the value selected in mode 4 ("more config" "bobby size"). Selectable diameters are 50 (2"), 75 (3") and 100 mm (4").

Disabling the Auto-stop Function

• To run the film completely through the film channel without end stop, press the "Film" Key ⇨ **photo** during projection or high speed shuttle. The frame counter display flashes, the auto-stop feature is disabled and the film runs through the film channel without stopping.

The auto-stop function is reactivated by changing the direction of film transport with the Master Control Knob.

master control knob

"film"- key

6.2 Highspeed Shuttle/ Rewinding

By turning the Master Control Knob ⇨ **photo** beyond the highest projection speed to the left or right, the film runs at a speed of approx. 200 fps in the selected direction. During this high speed transport mode the film stage is lifted up by magnets for safer film transport. When releasing the Master Control Knob, film transport is reduced to fastest projection speed.
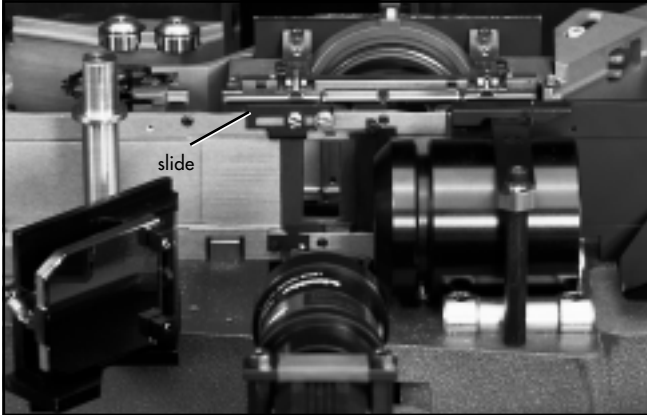
slide

6.3 Sprocket Projection

A slide on the film gate ⇨ **photo** allows for a sprocket projection.

For the evaluation of image steadiness and sprocket quality, there are ports in the film gate ⇨ **photo**, which make it possible to check the sprockets both horizontally and vertically.
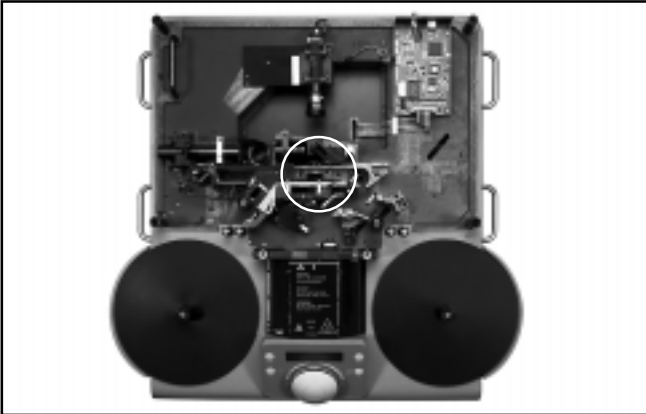
6.4 Loop Forming Position A/B

Positive and negative perforation films are projected in optimum quality in the loop former – Position A.

Only in exceptional cases when special films have negative perforations, it does become necessary to set the loop former to position B in order to obtain an optimum image quality.

- Open film channel with "Film"-key.

- Switch off main power supply.

- Unlock lamp cover and remove.

snap locks

lamp cover

"film"- key

position "A"
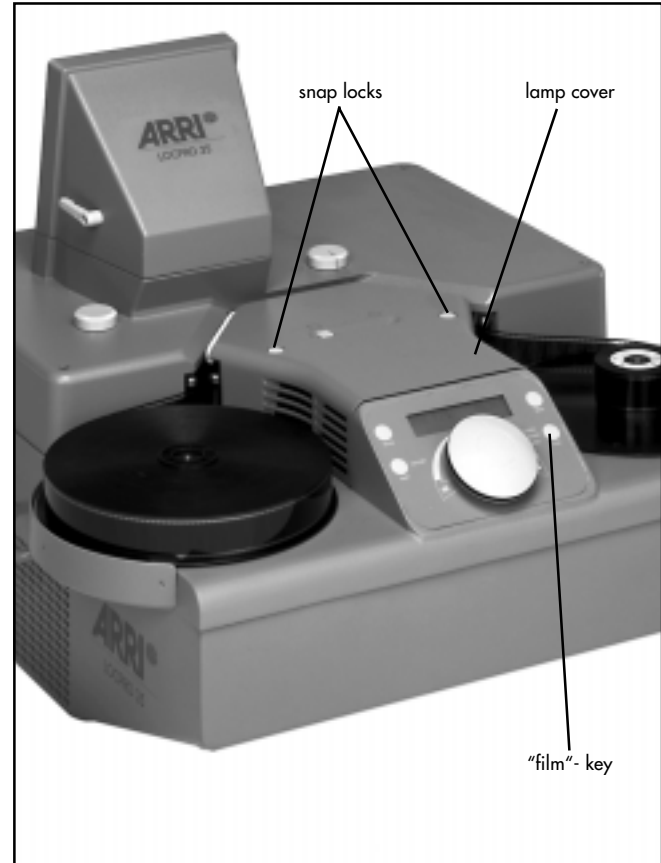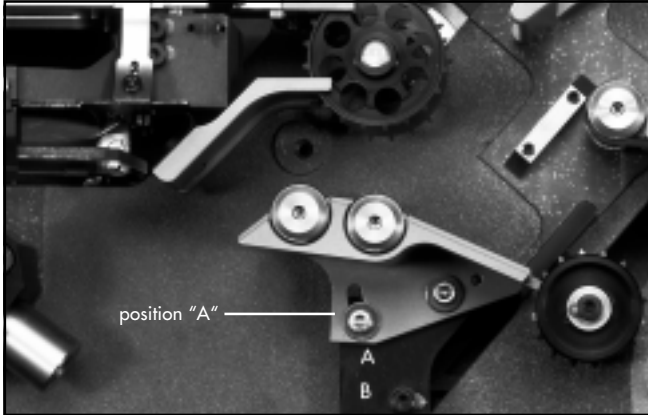
position "B"

- Slightly loosen both fixing screws on the loop former ➪ **photo** and turn the loop former in the direction of the user panel to position B.

- Tighten screws again.
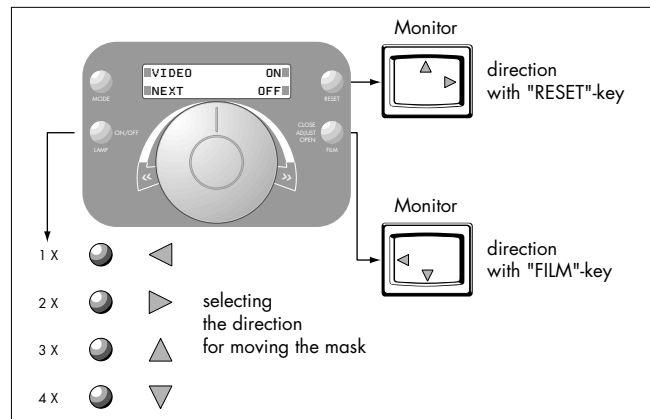
- Replace lamp cover and secure.
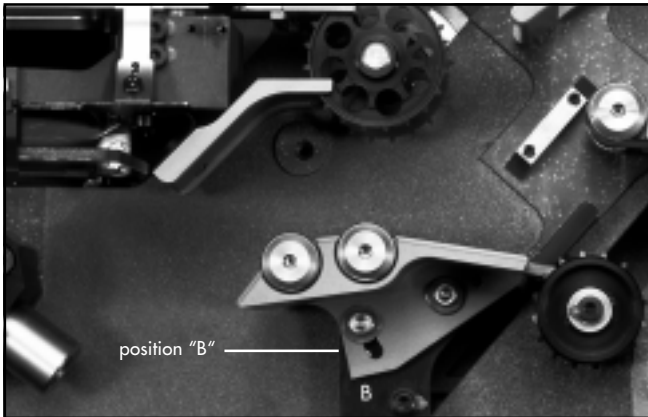
6.5 Video

6.5.1 Masking of Video Images

It is only possible to mask a video image when the Master Control Knob is in the "0" position (still projection).

1) Connect a monitor to one of the two video sockets.

2) Select "Video" (mode 2) by depressing the "Mode" Key ⇨ **photo**.

3) Frame masking is activated with "Reset" Key and deactivated with "Film" Key.

4) After the masking function is activated, select the side to be masked (top, bottom, right, left) with "Lamp" key. Masking and shift direction arrows (<>^v) are only visible on the monitor ⇨ **photo**.

5) Adjust masking of the video image to the required position by using the "Reset" and "Film" Keys.

Mode 2: Masking of Video Images

"mode"- key   "reset"- key

"lamp"- key   "film"- key

direction with "RESET"-key

Monitor

direction with "FILM"-key

1 X   ◁
2 X   ▷   selecting
3 X   △   the direction
4 X   ▽   for moving the mask

6.5.2 Video operation

The video camera can only be switched on and off when the film is not being transported.

When the video camera in the LOCPRO 35 is switched on, the revolving shutter and consequently, film transport are automatically synchronized by the video signal of the video camera.

In this case, the revolving shutter of the LOCPRO 35 runs at 50 fps (PAL) or 59.94 fps (NTSC).

Cine Mode 48/48 is not suitable for video. The video camera can be switched on, however, it is not in sync with the LOCPRO 35.

The film transport speed depends on the position of the Master Control Knob and the setting in the "mode" menu (see table).

PAL Video Camera

Menu	Video		filmtransport in fps (master control knob position)					
Standard			50	25	12.5	6.25	3.12	1.56
48/48	off		48	24	12	6	3	1.5
48/48		on	not to be used (asynchronous)					
50/50	off	on	50	25	12.5	6.25	3.125	1.5625
24/50	off	on	50	24	12.5	6.25	3.125	1.5625
30/50	off	on	50	30	12.5	6.25	3.125	1.5625

NTSC Video Camera

Menu Standard	Video	filmtransport in fps (master control knob position)					
		60	30	15	7.5	3.75	1.875
48/48	off	48	24	12	6	3	1.5
48/48	on	not to be used (asynchronous)					
60/60	off	60	30	15	7.5	3.75	1.875
60/60	on	59.94	29.97	14.985	7.493	3.746	1.873
24/60	off	60	24	15	7.5	3.75	1.875
24/60	on	59.94	23.976	14.985	7.493	3.746	1.873
25/60	off	60	25	15	7.5	3.75	1.875
25/60	on	59.94	24.975	14.985	7.493	3.746	1.873

Note: The digits after the decimal point are not shown on the display.

The reduced transport speeds (1 per thousand with NTSC Video Operation) are displayed as the non-reduced speeds, e.g. 59,94 fps is displayed as 60 fps.

6.5.3 Operation Modes

Cine Mode

Projection speeds of films shot at standard rates of 24 fps and 25 fps can be selected via the "Mode" Key.

Telecine Mode / Pulldown Mode

For the transfer onto video tape the corresponding projection speed of 24, 25 or 30 fps (for 50 and 60 Hz video) can be selected via the "Mode" key.

Telecine Mode

If the LOCPRO 35 is equipped with a 50 Hz video camera (PAL) the 24 fps or 30 fps film projection speed is auto-matically synchronized to the scan rate of the video camera.

Pull-down Mode

The pull-down mode is a special process for flicker-free transfer of film with shooting frequency of 24 fps onto video tape when an NTSC camera is used as film scanner.

6.6 "Mode" Key (Unit Configuration)

The frame rates are directly selectable and fixable via the "Mode" Key.

The "Mode" Key only functions when the Master Control Knob is in the "0" position and the film is not being transported.

Note: Those keys in the "Mode" menu which can be acti-
           vated are marked in the display with a dark bar.

Mode 1:   Normal display view (with mains switch on).
           Display left: Frame rate fps
           Display right: Frame counter
           (in case of error: error code)

Mode 2:   Setup for video frame masking
           Press "Mode" key once
           Display left: Video, Next
           Display right: On/OFF
           (see also chapter 6.5.1)

master control knob

000 FPS   00275

Mode 2: Masking of Video Images

Video   > ^ ON
NEXT   < v OFF

"Mode"- key

"Reset"- key

48/48 FPS

"Film"- key

Mode 3: Setup speed
        Press "Mode" Key twice

• Select desired speed by repeatedly pressing "Reset"
  key (higher value) or "Film" key (lower value).

Frame Rate Selection 50 Hz projector:

Display	fps	fps max.	Shutter	Mode of operation
48/48	24	48	48 rps	Cine Mode
50/50	25	50	50 rps	Cine Mode
24/50	24	50	50 rps	Telecine Mode
30/50	30	50	50 rps	Telecine Mode

Frame Rate Selection 60 Hz projector:

Display	fps	fps max.	Shutter	Mode of operation
48/48	24	48	48 rps	Cine Mode
60/60	30	60	60 rps	Cine Mode
24/60	24	60	60 rps	Pull down Mode
30/60	30	60	60 rps	Telecine Mode

Mode 4: Select film type and film core diameter (Bobby size) – Press "Mode" key three times
Display left: More config.
Display right: Y

- Press "Reset" Key 1 x
  Display left: Perfo Corr.
  Display right: Memory 1-5
  Select requested memory (film type) by repeatedly pressing "Reset" Key (higher value) or "Film" Key (lower value).

  Factory-programmed film types:
  Color film pos. perforation (acetate) .... memory 1
  Color film neg. perforation (acetate) .... memory 2
  Color film pos. perforation (polyester) .... memory 3
  b/w neg. perforation (polyester) .... memory 4

- Press "Mode" Key
  Display film core (bobby size) e.g. 50 mm (2")
  Select requested film core diam. by repeatedly pressing "Reset" Key (larger diam.) or "Film" Key (smaller diam.)
  Selectable diameters are: 50 (2"), 75 (3") and 100mm (4").

- Exit menu by repeatedly pressing "Mode" Key (Display in normal view)

End Setup

`MORE CONFIG  Y`

End Setup

`PERFO CORR 1 △`
`▽`

higher value

lower value

`BOBBY SIZE   △`
`50 MM        ▽`

higher value

lower value

mains switch

master control knob
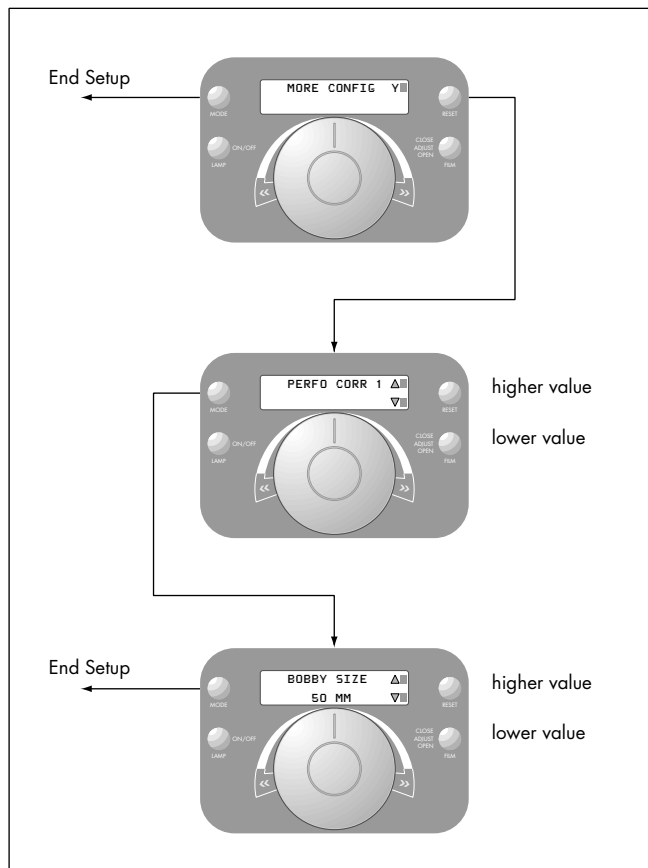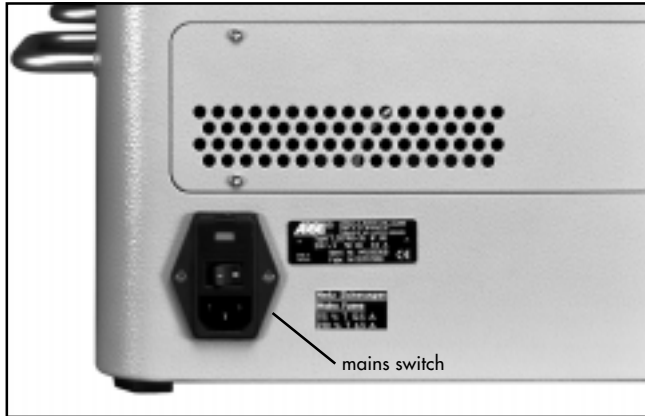
6.7 Controls

6.7.1 Mains switch

The mains switch is located on the rear panel of the projector ⇨ **photo**.

6.7.2 Master Control Knob

The Master Control Knob ⇨ **photo** is used to select the frame rate, forward (turning to the right) and reverse (turning to the left). For high speed winding/shuttle, turn the Master Control Knob to either side, all the way to the end stop.

6.7.3 "Film" Key

The "Film" Key ⇨ **photo** has six different functions:

"film"- key

- *Close the film channel:*
  When the film channel is in the open position, it can be closed by pressing this key.

- *Open the film channel:*
  When the film channel is in the closed position, and this key is depressed for more than 0.8 seconds, the film channel opens.

- *Frame line adjustment:*
  When the film channel is closed and the Master Control Knob is in the "0" position (no film transport), the frame line is shifted by $^1/_4$ of the image with each brief keystroke.

- *Single frame left:*
  When film channel is closed and Master Control Knob is slightly turned to the left, off the "0" position, a dot-mark appears on the display (see chapter 6.1.4). Each keystroke advances the film one frame to the left.

- *Single frame right:*
  When the film channel is closed and the Master Control Knob slightly turned to the right from the "0" position, a dot appears on the display (see chapter 6.1.4). Each keystroke advances the film one frame to the right.

- *Disabling the automatic end stop:*
  During normal film transport or high speed operation (200 fps), the automatic end stop can be disabled. The display flashes as long as this function is active.

6.7.4 "Mode" key

The "Mode" key ⇨ **photo** only functions, when the Master
Control Knob is in the "0" position. Each stroke of this key
leads to the next lower menu level, i.e. from mode 1 to
mode 2, etc. (see chapter 6.6).

"Mode"- key

Mode 1: Normal viewing
The display shows the frame rate in fps on the
left sideand the frame counter on the right (if an
error occurs, an "error" message will appear).

Mode 2: Video masking
Depress "Mode" key once.
A video mask can then be positioned on all four
sides, and the masking function can be switched
on and off. The masks are only visible on the
video monitor. (see chapter 6.5.1 "Masking of
Video Images").

Mode 3: Frame rate selection
Press "Mode" key twice.
The programmed frame rate can be changed
by repeatedly pressing of the "Reset" key
(higher values) or of the "Film" key (lower values).

Mode 4: Unit configuration
Press "Mode" key three times.
In this mode the film type and film core diameter
can be selected (see chapter 6.6).

6.7.5 "Lamp" Key

• The HTI-Lamp is ignited by pressing the "Lamp" key ⇨ **photo**.

• The HTI lamp is switched off by pressing the "Lamp" key again (5 seconds waiting time after switch-on).

6.7.6 "Reset" Key

• The "Reset" Key ⇨ **photo** resets the frame counter to "0".

• The "Reset" Key is also used for settings described in section 6.6.

6.7.7 Control Knob "Focus"

The control knob "Focus" ⇨ **photo** is used to adjust the sharpness of the projected image.

6.7.8 Adjusting Knob "Video"

With the "Video" adjusting knob ⇨ **photo** it is possible to swing the mirror for video deflection in or out of the optical path of the projector.

"Image Position" lever

Adjusting knob "Video"

"Focus" control knob
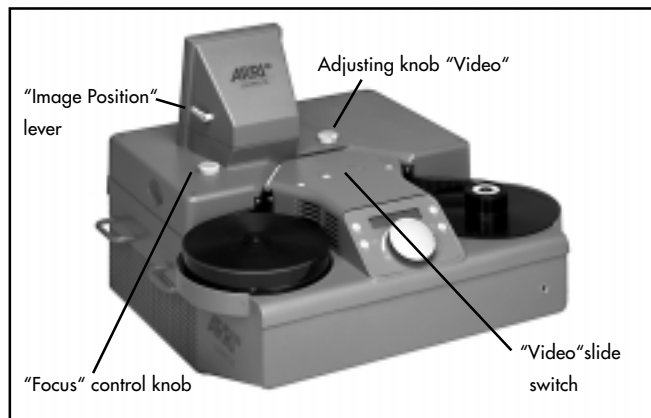
"Video" slide switch

6.7.9 "Video" Slide Switch "VSS"

To switch on the video camera, shift the "video" slide switch ⇨ **photo** to the TV symbol. The Shutter/Video camera synchronization is now controlled by the video camera, if the unit is set to the normal "Mode" (shutter 50 or 60 Hz).

Note: The speed in the menu "Mode" should not be set at 48/48 (Cine Mode).

6.7.10 "Image Position" lever

The image position lever ⇨ **photo** is used to shift the projected image upward or downward on the projection wall.

6.8 Infrared Remote Control

The following functions can be selected via remote control:

• Start: To start, press the key for the required frame rate

Note: This applies only to the standard settings 50/50 and 60/60. If these settings were changed in the "Mode" function (Telecine Mode or Pulldown Mode), then this frame rate prevails and is selected. See chapter 6.5.2.

50 Hz-Version:

Menu key:	6 fps	12 fps	25 fps	50 fps	Mode
48/48	6	12	24	48	Cine Mode
50/50	6	12	25	50	Cine Mode
24/50	6	12	24	50	Telecine Mode
30/50	6	12	30	50	Telecine Mode

60 Hz-Version:

Menu key:	6 fps	12 fps	25 fps	50 fps	Mode
48/48	6	12	24	48	Cine Mode
60/60	7.5	15	30	60	Cine Mode
24/60	7.5	15	24	60	Pulldown Mode
25/60	7.5	15	25	60	Telecine Mode

- Stop/Still Projection:
  Press key with the current frame rate.
  or press the "Stop" key.

- High speed winding, forwards or backwards « ».

- Frame line shifting.

- Single frame, forwards or backwards.
  If one of the single frame keys is held down,
  the projection speed changes to: 3.12 fps at 50 Hz or
  3.75 fps at 60 Hz.

Note: In case IR remote control fails, check batteries first.

6.9 Interfaces

Note: All interface cables used must comply with CE
          and EMV guide lines.

6.9.1 Serial Interface (X1)

Plug type: Sub-D 25 pin socket

Via serial interface (X1) ⇨ **photo** the operational status of the
LOCPRO 35 can be checked and changed from a computer.

Chapter 8 "Serial Interfaces X1" contains listings of
technical data as well as listings of computer commands.

Plug – Pin configuration: See Annex "Interfaces"

6.9.2 Ext Synchro (X2)

Plug type: Sub-D 15 pin socket

Via this interface ⇨ **photo** a signal for shutter synchroni-
zation can be supplied externally and the internal shutter
signal accessed.
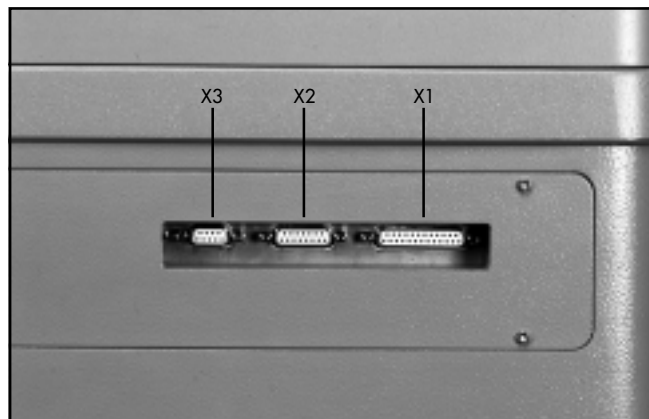
Cine Mode: .... 48 Hz
Normal and Telecine Mode: .... 50 or 60 Hz
Shutter revolutions can be changed by ± 3%.
Input: .... 5 V TTL potential-free on optocoupler
Output: .... 4 V potential output or potential-free

Plug Pin configuration: see annex "Interface"

Note for shutter synchronization:
Signal source:
External   =   control frequency via X2; top priority!
Video   =   when video "on". Quartz of video camera.
Internal   =   internal quartz generator.

6.9.3 Timecode (LTC) and Biphase A/B (X3)

Timecode:
For sound synchronization of a DAT tape player with the LOCPRO 35, e.g. during transfer of film and sound onto video tape, a timecode signal is supplied on interface X3 ⇨ **photo** (see page 39).

The timecode signal (80 Bit per picture) is only supplied in the forward running mode (to the right) with frame rates of 24 fps, 25 fps or 30 fps. The read-out timecode frame numbers correspond to those of the frame counter on the display. A frame counter reset on the LOCPRO 35 therefore also resets the timecode to zero.

The projection frame rate of the LOCPRO 35 has to be matched to the DAT speed. This is possible via "Mode" Key (see chapter 6.4.2).

If the LOCPRO 35 is synchronized externally, ensure accurate synchronization frequency within ± 1%.

1) Run the LOCPRO 35 and DAT tape player separately to the sync point (starting position of transfer with appropriate leader).

2) Connect the DAT tape player via interface cable (9 pin Sub-D on XLP plug) with socket X3.

3) Reset frame counter to zero ("Reset" Key). If necessary, set the timecode value supplied at the sync point of the DAT recorder to offset so that the the time code value "0" emanating from the LOCPRO 35 corresponds to the value expected at the DAT recorder.

Start the transfer with the Master Control Knob.

Biphase:
Biphase operation is only possible with the Audio Sync Unit (ASU).

To synchronize with external units, a sync pulse (1 pulse per picture) is supplied on interface plug X3. When connected to a programmable ASU, a biphase signal is generated from this sync pulse.
(biphase A/B = moving direction recognition).

Plug type: 9-pin Sub-D socket.

7. Service and Maintenance

To preserve optimum projection and image quality, it is essential to check the brightness and image quality every six months and, if necessary, during such a maintenance service the LOCPRO 35 should be adjusted to meet factory quality standards.(see "Service Manual").

⚠️ *Make sure that the LOCPRO 35 is switched off and completely disconnected from the mains before starting service or maintenance work. Unplug all interface connections.*

7.1 Cleaning the Film Track

⚠️ *Never use hard or metallic objects for cleaning. We recommend using the ARRI Plastic Film Track cleaning Skewer, Id.No. K5.26167.0 or maintenance tool kit incl. Cleaning kit, Id.No. M2.81126.0. Both items can be ordered.*

1) Press the snap locks ⇨ **photo** on the lamp cover and remove lamp cover.

snap locks   lamp cover

control knobs

optic cover

4 screws

lamp cover

loop box

filmtrack

deflection
runner 2

deflection
runner 1
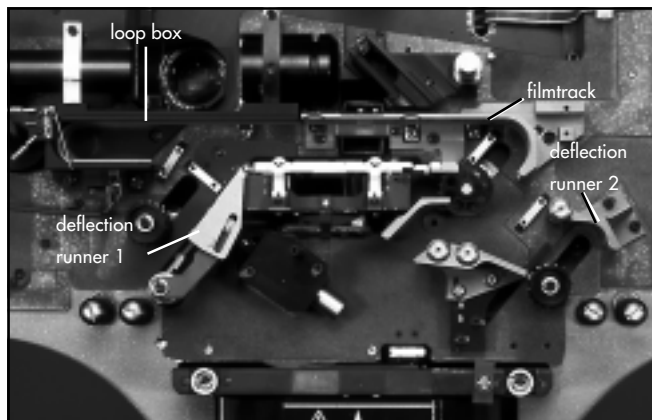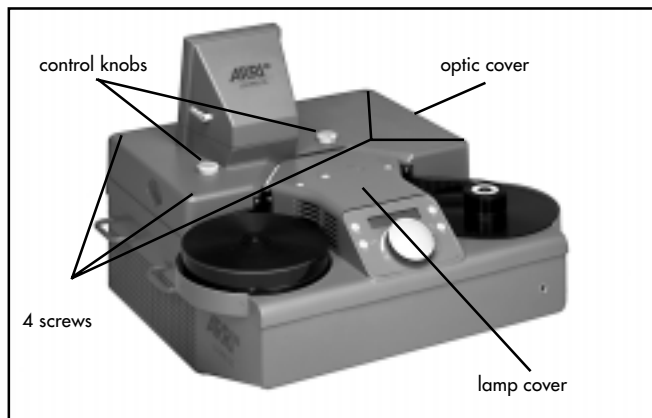
2) Pull off the control knobs ⇨ **photo** upward.

3) Remove all four screws ⇨ **photo** with hex. Wrench SW3 and lift off optics' cover completely.

⚠️ *Attention:*
Do not damage BNC and S-VHS plug and make sure that there is no cable connected to the BNC or S-VHS plug!

4) Remove emulsion deposits and possible adhesive residues from film track ⇨ **photo**, deflection runner 1 and 2 ⇨ **photo** and loop box left.

5) Replace lamp cover.

6) Replace optic cover

7) Replace control knobs and fasten optic cover with the screws.

7.2 Cleaning Mirror and Lens

Note: Mirror surfaces should only be cleaned if necessary, as too frequent cleaning reduces the life of the mirrors (surface silvering). Slight dust does not visibly affect image quality.

1) Pull off the control knobs ⇨ **photo**.

2) Remove all four screws ⇨ **photo** with hex. socket wrench SW3 and carefully lift off optics' cover.

⚠️ *Attention!:*
Ensure that BNC and S-VHS plugs are not damaged.

3) Remove dust from mirrors 1 and 2 ⇨ **photo**, using lens cleaning brush and, if necessary, lens cleaning tissue and some alcohol.

4) Push lens yoke ⇨ **photo** to the left out of its lock and swing away.
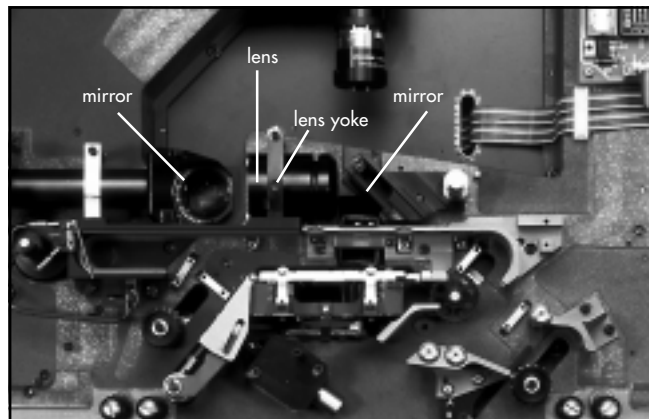
5) Take out lens ⇨ **photo**. Clean front- and rear lens with lens cleaning tissue.

6) Re-insert lens.

7) Ensure that the driver pin catches in the lens groove.

8) Swing lens yoke into position and lock.

9) Carefully reattach optic cover and fasten with four screws.

10) Reattach control knobs.

7.3 Shipping and Storage

1) Put shipping safety label onto right film plate and screw in shipping safety screw while the film channel is open.

2) The LOCPRO 35 should only be stored or transported in the upright position and in its original packing.

screw driver

7.4 Replacing the Fuses

Before replacing blown fuses, first eliminate the cause.

See Annex - Trouble Shooting List

⚠️ *Before replacing fuses, the LOCPRO 35 must be completely disconnected from the mains.*
Follow the safety and warning instructions in the user manual.
When lifting off the optic cover do not damage BNC and S-VHS plug.

The main fuses located in the main power socket are accessible from the outside.

- Open down the hinged flap ⇨ **photo** on the socket, using a small screwdriver, and remove the fuse holder ⇨ **photo**.

Fuses Primary Circuit (Mains)

- 2 fuses in main power socket
  115 V .... Type 5x20, 2 x T 12.5 A
  230 V .... Type 5x20, 2 x T 6.3 A

Note: When replacing 230 V fuses, make sure (glass tube 5 x 20 mm EURO) to slide the fuses all the way up to the front, as otherwise no electrical contact is made ⇨ **photo**.

fuse set

fuse

8. Technical Data

Projector type .... LOCPRO 35 St/ LOCPRO 35 TV

CE certificate .... Guideline 89/336 EEC of 3. May 1989
"Guideline of the Council of 3. May 1989 for bring-
ing into line the statutory regulations of the member
countries about electromagnetic side-effects."
Guideline 73/23 EEC of 19.02.73
"Guideline of the Council of 19. Feb. 1973 for
bringing into line the statutory regulations of the
member countries with respect to electrical
operating material for use within particular
voltage limitations.

Film format .... 35 mm negative/positive perforation
according to DIN 15501/ISO 491-1983

Filmgate .... 18.6 x 24 mm, selectable via format masks

Lens .... F2/50 mm

Film capacity .... 300 m / 1000 ft
With 50 and 75 mm film core

Film core .... 50/75 and 100 mm selectable

Projection lamp .... 400 W HTI-lamp Id.No. M5.81802.0

Weight .... approx. 56 kg

Dimensions .... 740 mm (w)x700 mm (d)x510 mm(h)

Wall projection .... 2300 mm (w) at 12 ft distance to wall
(see separate data sheet)

Projection rates .... 50 Hz operation 50, 25, 12.5, 6.25, 3.12, 1.56 fps
60 Hz operation 60, 30,15, 7.5, 3.75, 1.87 fps
Cine mode 48, 24, 12, 6, 3, 1.5 fps
Telecine mode 24, 25, 30 fps
with timecode output
Pulldown mode 23.976 fps (mode 24/60)
with timecode output

Single frame: .... Forward/reverse

Image steadiness: .... < 0,2%

HS shuttle/rewind: .... 200 fps forward and reverse

Operation conditions: .... 10° to 40°C, 10-90% air humidity

Power supply: .... 180 – 253 V / 50 Hz, 90 – 127 V / 60 Hz

Power consumption: .... 230 V, 3.5 A / 115 V, 7 A

Computer interface: .... RS 232, 8 Bit, no parity, one start and one
stop bit

Digital display: .... Frame counter, 5 digits
Projection speed
Set up Mode (selectable by "Mode" key),
unit configuration,
filmcore diam. selection,
film type selection

Frameline adjustment: .... 1/4 image per keystroke

Auto-Stop: .... film run stops automatically 2 m (6 ft) before
end of film

Auto winding recognition: .... no switchover necessary when changing
winding direction A or B

Focussing: .... manually

Projection height adjustment: ..... max. 15°

Accessories: .... mains cable, maintenance tool kit,
Video camera (optional)
IR-remote control (optional)

Covering cap (optional)
Shipping and projection case (option)
ASU (Audio Sync Unit),
Timecode cable for DAT recorder (optional),
Image format masks (optional)

1/3" CCD-Color IMAGER

	PAL	NTSC
Signal system:	PAL	NTSC
Pixels:	752 (H) x 582 (V)	768 (H) x 494 (V)
Scanning area:	6,0 mm x 4,96 mm	6,0 mmx 4,96 mm
Synchronization:	internal	internal
Scanning system:	2:1 interlaced	2:1 interlaced
S/N ratio:	46 dB	48 dB
H/V resolution:	460 (TV) lines	470 (TV) lines
Video output:	FBAS or Y/C	FBAS or Y/C
Video masking:	freely adjustable	freely adjustable

Serial Interface (X1)

An ASCII terminal or a personal computer with terminal emulation program can be connected to the serial interface. This makes it possible to check and change the operating parameters.

Some image processing programs allow the integration of control commands which are transmitted to the serial interface.

Connection of PC or terminal via 1:1 connected interface cable (no zero modem cable, no crossed connections).

Setting values
of serial computer interface

Baud rate: .... 9600 Baud/S

Data format: .... 8 bit, no parity, one start- and one stop bit

Plug type: .... 25 pin D-sub socket

Pin configuration: .... see annex "Interfaces"

Command Outline

RFX .... Run Forward

Function:

Forward running at selected projection speed.

Parameters (50 Hz Version)

X =	0	1	2	3	4	5	6
fps	50	25	12.5	6.25	3.12	1.56	0

Parameters (60 HzVersion)

X =	0	1	2	3	4	5	6
fps	60	30	15	7.5	3.75	1.87	0

Note: This applies only for standard settings (50/50 and 60/60). If these are changed by "Mode" function (Telecine Mode or Pulldown Mode) then this frame rate is dominating. See Chapter 6.4.2.

RRX .... Run Reverse

Function:

Reverse running at the selected projection speed

Parameters 50 Hz and 60 Hz version see table RFX.

WF .... Wind Forward
Function:
Highspeed shuttle at 200 fps (forward)

WR .... Wind Reverse
Function:
Highspeed shuttle at 200 fps (reverse)

SF .... Single Frame Forward
Function:
Advance one frame

SR .... Single Frame Reverse
Function:
Reverse one frame

OC .... Output Counter-Value
Function:
The frame counter value of the LOCPRO 35 is
displayed on screen.

OF .... Output whether a film is loaded
Function:
Inquiry to the LOCPRO 35 whether a film is
loaded in the unit.
Screen output: 1 = loaded
                          0 = not loaded

OI .... Output Instruction Code
Function:
System identification code of LOCPRO 35 is
displayed on the screen LOCPRO-35-01

OO .... Output Option
Function:
The mains frequency set on the
LOCPRO 35 is displayed on the screen.
0000 = 50 Hz
0100 = 60 Hz

OR .... Output Run or Stop
Function:
Inquiry to the LOCPRO 35 whether the film is
transported.
transported   = 1
not transported = 0

OV .... Output Version No.
Function:
EPROM version number is displayed on the
screen

9. Trouble-Shooting Table

This trouble-shooting table serves the user and the service engineer as an aid for locating and correcting possible faults.

⚠️ *The following must be strictly observed:*
- *The LOCPRO 35 must be disconnected from the main power before starting any service or repair jobs, and all interface connections must be removed.*

⚠️
- *The safety and warning notes contained in the operating and service manuals must be strictly followed.*

⚠️
- *Ensure that the BNC- and S-VHS plugs are not damaged when removing the optics cover.*

Tools and adjusting devices required for service and repair are described in the Service Manual.

Note: In the following the test computer is referred to as "Laptop". However, a PC with suitable emulation program can also be used.

Fault	Cause	Remedy
Mains "ON" without function unit will not operate	Mains voltage failure?	Connect to another electrical socket and check.
	Mains cable connected to projector?	Check mains connection and replace mains cable if necessary
	Primary fuses defective (F1, F2, mains socket)	Replace fuses (see service instructions)
	Projector voltage different from mains voltage	Check mains voltage setting on name plate. If different from actual mains, have service engineer make necessary change. Important: Change name plate! Inform ARRI-Service-Workshop
Rotating shutter not operating "E152"	Lamp cover not in position or safety switch not actuated.	Attach lamp cover, and clean actuation opening for safety switch
	Temperature sensor in lamp housing has responded	Switch on unit for cooling (without switching on HTI lamp). Allow 2 minutes for cooling off, then briefly switch off and on with mains switch. Ignite HTI lamp again.

Fault	Cause	Remedy
Projector does not work with IR Remote control	Projector not switched on?	Switch on projector.
	Low remote control battery?	Replace battery.
	IR-window on front of projector is screened off by obstacles in room?	Make IR-window accessible for transmitter pulse.
	Battery in remote control is placed in wrong direction	(reversed polarity) Insert battery correctly and try again.
	IR-remote control defective	Call ARRI Service station.
Image runs out of focus when switching over from still to motion picture (and vice-versa)	Jet underneath film gate clogged.	Remove foreign matter.
	Blower break-down.	Call ARRI Service station.
	Guide vane misadjusted.	Call ARRI Service station.
Positive film has scratches on emulsion side in picture area	Emulsion buildup in film gate.	Clean emulsion deposits from film gate using ARRI plastic scewer.
	Film gate damaged by stapled film.	Call ARRI Service station.
Negative film has scratches on emulsion side in picture area	Emulsion buildup on pressure pad of film stage	Remove emulsion deposit from pressure pad, using ARRI film track cleaning scewer.

Fault	Cause	Remedy
Scratches in film perforation area	Emulsion buildup on film guiding parts.	Clean film guiding parts in accordance with maintenance instructions.
	Film guide runners damaged, surface worn through.	Call ARRI Service station.
	Pressure pad damaged by stapled film	Call ARRI Service station.
Scratches on film backing side Positive and negative film	Emulsion deposits on pressure pad or on film gate	Clean pressure pad and film gate in accordance with maintenance instructions.
	Pressure pad jamming.	Call ARRI Service station.
HTI-Lamp dark after ignition	HTI lamp not properly installed	Check HTI Lamp plug for correct locking (experienced personnel only)
	Defective lamp	Replace lamp (experienced personnel only)
	Ballast not functioning	Call service engineer

Fault	Cause	Remedy
HTI lamp dark after ignition	Thermofuse in ballast or in lamp housing has reacted	Switch on unit for cooling (without switching on HTI lamp). Allow 2 minutes for cooling off, then briefly switch off and on with mains switch. Re-ignite HTI lamp.
	Ventilation fans not operating	Call service engineer.
HTI-Lamp "ON" but not functioning	Master Control Knob not in "0" position	Turn Master Control Knob to "0" position
	Electronics disturbed	Carry out mains reset. Switch unit off for approx. 30 seconds. Then switch on again and start new ignition attempt. If this fails, call service engineer.
	HTI lamp defective	Replace HTI lamp (experienced personnel only).
	Fuse defective	Call service engineer.
Keyboard illumination and/or display dark	Control voltage failure	Call service engineer

Fault	Cause	Remedy
Film channel **"OPEN/CLOSE" function disturbed**	Foreign matter in film channel. Film loop cannot be formed	Remove obstacle and actuate "Film" key once again.
	Film not properly inserted	Tension film slightly on both film plates with film channel open. Film must drop totally to bottom of film channel.
	Lamp cover not properly seated or distorted	Check film channel slide on lamp cover for easy running. If sluggish, replace and lock lamp cover with film channel open. If this fails, call Service Engineer.
	Loop sensor dirty; Reflex light barrier on left loop box doesn't detect film loop.	Clean with ARRI maintenance tools.
	Electronic board defective	Call ARRI Service station
Sudden stop during film transport	Film loop monitor switch has detected improper splicing or stapled film	Open and close film channel. Repeat film transport. In case of stapled film remove staples and replace by splicing. Then check pressure pad and film guiding elements for possible damage.

Fault	Cause	Remedy
Sudden stop during film transport	Loop sensor and reflex protector on left loop box dirty with film dust.	Clean with ARRI maintenance tools.
	Emulsion build-up in film channel.	Remove emulsion build-up from film pressure stage, film track, deflection runner 1 and 2 and from film pressure plate, using ARRI maintenance tools.
Operation too noisy	Improper length of film loop.	Open film channel and slightly tension film loop manually by turning the two winding plates. Then close film channel. If fault still exists, call service engineer.
Film transport speed malfunctioning	Setting on master control knob doesn't correspond to selected frame rate.	Call ARRI Service station.
Autostop malfunctioning	Wrong film core. Film core diameter must correspond to the one selected in "Mode" function (Bobby Size).	Use correct film core diameter.

Fault	Cause	Remedy
No video image	Operator error	Shift slide switch "Video" to TV position.
		Swing mirror out of optical path with video knob.
		Connect unit with monitor.
		Set correct channel selection on monitor.
		Close film channel. Ignite HTI lamp.
	Video camera defective	Call ARRI service station.

Error Messages in Display

Fault	Cause	Remedy
E-No. 102 > Carriage cannot be moved.	Foreign matter in film channel area.	Take off lamp cover and remove foreign matter.
	Carriage jamming.	Call ARRI Service station.
	Control error	Call ARRI Service station.
E-No. 104> Carriage cannot be totally opened.	Foreign matter in film channel area.	Take off lamp cover and remove foreign matter.
		Check mechanism of film track 2 and of deflection runner 2 for movability.
	Electric breakdown.	Call ARRI Service station.
E-No. 106> No loop forming possible by main motor.	Film jamming in film channel caused by foreign matter.	Remove foreign matter.
	Film winding plate jamming.	Call ARRI Service station.
	Motor or electronics defective	Call ARRI Service station.

Fault	Cause	Remedy
E-No. 108 > Carriage doesn't close properly.	See E-No. 102 Shipping safety screw screwed in	See E-No. 102. Remove shipping safety screw.
E-No. 110 > Carriage doesn't close or closes too slowly.	See E-No. 102	See E-No. 102.
E-No. 112 > as E-No. 108 Dual loop almost completed.	See E-No. 102	See E-No. 102.
E-No. 114 > Dual loop cannot be completed.	Film chips or splicing tape chips in film channel or film emulsion deposits on film guide parts.	Remove chips, clean film guide parts and remove emulsion deposits.
E-No. 120 > Film channel cannot be closed completely.	See E-No. 102	See E-No. 102.
E-No. 122 > Last frame of dual loop cannot be totally pulled in.	See E-No. 114	See E-No. 114.
E-No. 124 > Film channel opens again slightly after closing.	Control error.	Repeat procedure several times. If fault still exists after several attempts (indicated by E-No. 124) call ARRI Service station.

Fault	Cause	Remedy
E-No. 132 > Film channel opens again slightly after closing, loop not completed.	Foreign matter at deflection runner 2.	Remove foreign matter.
E-No. 138 > as E-No. 132, however, loop completed.	See E-No. 132.	See E-No. 132.
E-No. 142 > Main motor jamming during projection.	Foreign matter in film channel.	Open film channel and remove foreign matter. Check film track for possible damage.
	Poor film splices.	Splice film properly and reinsert film.
	Film sprocket roller jamming.	Take out film. Switch off mains switch. Take off lamp cover and carefully turn film sprocket roller by hand. If it doesn't turn, call ARRI Service station.
	Motor jamming.	Call ARRI Service station.
E-No. 144 > Motor jamming during rewinding.	See E-No. 142	See E-No. 142
E-No. 146 > See E-No. 142	See E-No. 142	See E-No. 142

Fault	Cause	Remedy
E-No. 148 > Feed and take-up motor jamming during projection.	Foreign matter in film channel.	Open film channel and remove foreign matter.
	Defective belt.	Check winders for turnability. If they can be turned independently from each other, call ARRI Service station.
	Feed and take-up motor drive jamming.	Call ARRI Service station.
	Film winding plate jamming.	Remove obstacle.
	Winding motor defective.	Call ARRI Service station.
E-No. 150 > Feed and take-up motor jamming during rewinding.	See E-No. 148	See E-No. 148
E-No. 152 > Shutter motor not running.	Lamp cover not placed in position or safety switch not actuated.	Attach lamp cover or clean actuation opening for safety switch.
	Revolving shutter jamming because of foreign matter.	Remove foreign matter or call ARRI Service station.
	Shutter motor defective. Video camera defective at video "ON". No sync signal for revolving shutter.	Call ARRI Service station. Test function with video "off". Otherwise call ARRI Service Station.

Fault	Cause	Remedy
E-No. 154 > Faulty location correcting data.	Electronic board defective.	Switch LOCPRO 35 on and off. If location correcting data still faulty call ARRI Service station.
E-No. 156 > Frame counter data lost when LOCPRO 35 is switched off.	Battery-RAM defective.	Call ARRI Service station.

10. ARRI Service

Germany .... Arnold & Richter Cine Technik
Türkenstraße 89
D-80799 München
Phone (089) 3809-0
Fax (089) 3809-1244
Fax Service (089) 3809-1793

USA .... ARRI USA
617, Route 303
Blauvelt, New York 10913
Phone (914) 353 14 00
Fax (914) 425 12 50

ARRI USA
600 North Victory Blvd.
Burbank, California 91502
Phone (818) 841 70 70
Fax (818) 848 40 28

GB .... ARRI (GB) Ltd.
The Movie House
1-3 Airlinks, Spitfire Way
Heston TW5 9 NR
Phone (0208) 848 88 81
Fax (0208) 561 13 12

Italy .... ARRI ITALIA S.R.L.
Viale Edison 318
20099 Sesto S. Giovanni,
Milano
Phone (02) 26 22 71 75
Fax (02) 242 16 92

ARRI ITALIA S.R.L.
Via Placania, 97
00040 Morena (Roma)
Phone (06) 79 89 02 02
Fax (06) 79 89 02 39

Canada .... ARRI Canada Ltd.
415 Horner Avenue, Unit 11
Etobicoke, Ontario
Canada M8W 4W3
Phone (416) 255 33 35
Fax (416) 255 33 99

11. Index

s

Annex Interfaces

Serial Interface
X1   DB 25

Pin	Signal
1	X
14	X
2	RXD
15	X
3	TXD
16	X
4	CTS
17	X
5	RTS
18	X
6	X
19	X
7	GND
20	X
8	X
21	1k +15 V
9	X
22	X
10	X
23	1k - 15 V
11	X
24	X
12	X
25	1k + 5 V
13	X
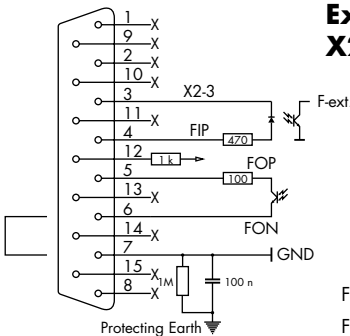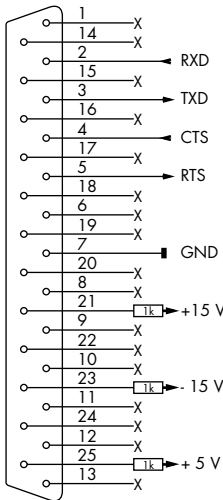
Ext. Sync. Interface
X2   DB 15

X2-3   F-ext.

FIP   470
1k   FOP   100
FON
GND
1M   100 n

Protecting Earth

Bridge for LOCPRO 35 Potential

FIP = Frequency Input positiv

FOP= Frequency Output positiv

FON= Frequency Output negativ

A/B u. LTC-Interface
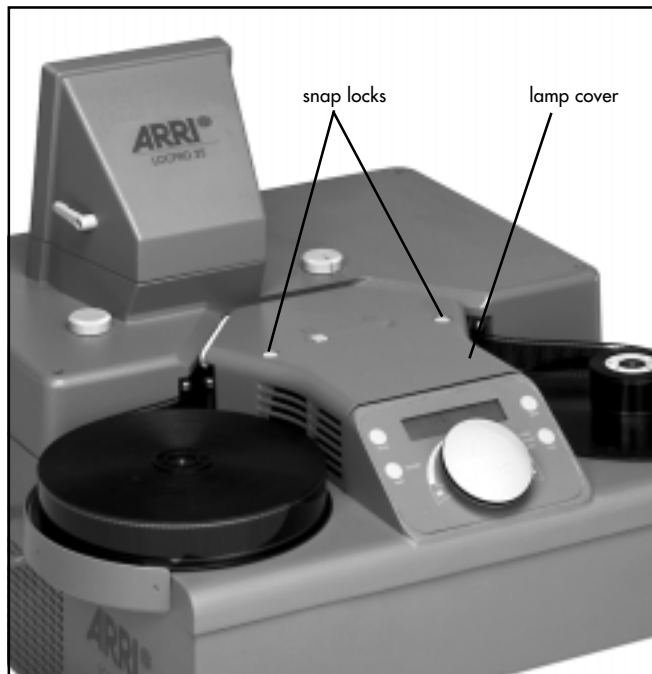**X3**   DB 9

+ 24 V

1   100
6   X3ON
2
7   GND
3   100   BOP
8   1k   + 5 V
4   100   AOP
9   1k   + 5 V
5   100   LTCOP
1k   + 5 V
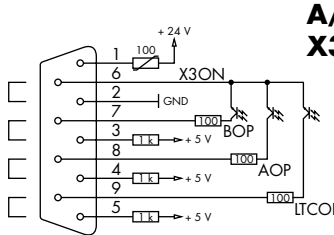
Bridge for LOCPRO 35 Potential

BOP = Canal B Output Positiv

AOP = Canal A Output Poistiv

LTCON = Timecode Output Positiv

X3ON = Output Negativ

Service Instructions

Service work only by instructed personnel!

snap locks   lamp cover

⚠ Caution: Danger of injury!
Before replacing of lamp allow approx.
2 minutes for cooling.

Note: Cooling blower is only active when projector is switched on.

1) Disconnect LOCPRO 35 completely from mains.

2) Remove lamp hood.

⚠ Caution: Danger of injury
After operation the metal plate hood covering of the lamp housing is hot. To avoid burns allow for cooling.

3) Open fixing screw of safety locking bar on plate hood ⇨ **photo** with hex. Wrench 3 mm until safety locking bar can be twisted by 90°. Swing away the plate hood which covers the lamp housing.

4) Depress both locking brackets on plug ⇨ **photo** and pull off plug ⇨ **photo**.

5) Unhinge both spring levers ⇨ **photo**.

⚠️ *Attention: To avoid fingersprints HTI lamp should only be touched with appropriate gloves.*

6) Pull out defective HTI lamp upwards

7) Insert new HTI lamp (Id.No. M5.81802.0) so that it snaps-in with its twist protector at the bottom right and sits flat on the lamp carrier (within the four centering pins).

8) Arrest on catch with both spring levers ⇨ **photo**.

9) Hold one hand against the plug plate and plug in the plug with the other hand until the catch snaps in.

10) Close plate hood, twist safety locking bar in locking position and screw on. Attach lamp hood and arrest snap locks.

locking bar

plate hood

locking screw

spring levers

HTI-lampe

locking brackets

twist protector
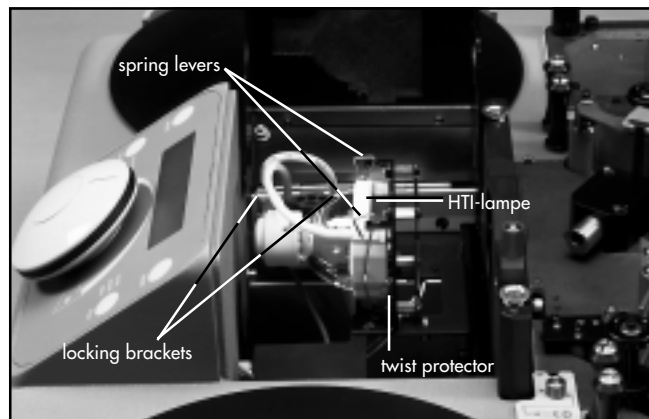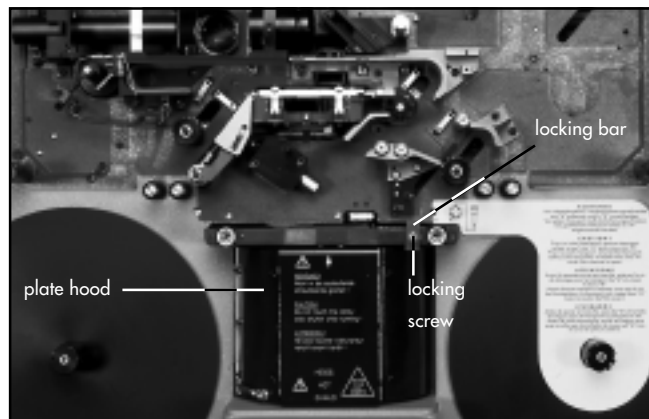
Technical data are subject to change without notice.

© ARRI 1999

Ident. No. M5.81929.0

available languages
Deutsch
English